No.



200200267

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Resource Seeds, Inc.

PLETENS, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITIORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS EROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE. OR USING IT IN ADDUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY SECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TRITICALE

'2115'

In Testimon Merrot, I have hereunto set my hand and caused the seal of the Hant Barrety Heatection Office to be affixed at the City of Washington, D.C. this twenty ninth day of April, in the year two thousand three.

1. .

Ge M Julie

Commissioner Plant Variety Protection Office Agricultural Marketing Service

CAPACITY OR TITLE

CAPACITY OR TITLE

President

DATE

INSTRUCTIONS 20020267

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,450 (\$300 filing fee and \$2,150 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Relain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

> Plant Variety Protection Office Telephone: (301) 504-5518 FAX: (301) 504-5291

Homepage: http://www.ams.usda.gov/science/pvp.htm

ITEM 18a. Give:

- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
- (2) the details of subsequent stages of selection and multiplication:
- (3) evidence of uniformity and stability; and
- (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
 - (1) identify these varieties and state all differences objectively:
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- 19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.
- 22. CONTINUED FROM FRONT Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety including any harvesled material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

USA, October, 2001, Torseed multiplication and test marketing.

3. CONTINUED FROM FRONT (Plane give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the ariety is protected by intellectual property right (Plant Breeder's Right or Patent).)

OTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's presentative during the life of the application/certificate. There is no charge for filling a change of address. The fee for filling a change of ownership or signment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, .175(h) of the Regulations and Rules of Practice.)

avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, ilding 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and ntaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for icing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your r. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all ibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braile, large print, audiciage, etc.) should contact the USDA Office virunications at (202) 720-2791. To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TD0). USDA is

470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (03-96) which is obsolete.

'2115' TRITICALE

Exhibit A. Origin and breeding history of the variety.

Triticale "2115" (Experimental triticale 97TN42115) is the result of hybridization, individual plant and bulk selection from the cross Presto//MZ4/XT419. Presto is a Polish winter triticale variety. MZ4 is a winter triticale breeding line obtained from Dr. Robert Mezger from his collection at Oregon State University. XT419 is a selection from the cross X28486/ A876OT made in 1986. X28486 is a winter triticale and A876OT is a spring triticale, both in the germplasm collection acquired by Resource Seeds from Pioneer Hi-Bred International.

The cross of Presto with the parent MZ4/XT419 was made in 1994 at Woodland, Ca. The F1 generation was grown in Gonzales, Ca. All even numbered plant selection generations were grown in North Carolina and all odd numbered ones were grown in California. The F4 generation plant seed was bulk harvested to begin yield testing in the F5 generation in 1997. A seed purification program was also begun in 1997. Head selections grown at Gonzales during the summer of 1997 were advanced to 1998 North Carolina yield trials to identify the most uniform, high yield lines to carry forward. In 1999 one head-row line was selected to represent the line 97TN42115. This line designated 97TN42115-A was advanced to our California location where breeder seed was produced, also in 1999. Foundation seed is being produced in North Carolina for harvest in the year 2000.

2115 has been phenotypically stable and uniform through four generations of seed multiplication. It has been noted during seed multiplication that a taller variants, of both earlier and later maturity, can be found at a frequency of up to 1.%.

'2115' TRITICALE

Exhibit A. Origin and breeding history of the variety. (continued)

Table A1. Selection Criteria

Generation	Criteria for Selection		
P1 x P2	None		
F1	None		
F2 through F5	Select for overall plant health, appearance, and minimal lesions and symptoms from pathogens as proxy for resistance or tolerance to: Powdery mildew Leaf rust Leaf and glume blotch Tan spot		
	Select for minimal damage from insect feeding as proxy for resistance or tolerance to: Hessian Fly Cereal leaf beetle		
	Select for: High tiller number Seed color (red) Seed plumpness		
	Select against: Lodging		
F6 & F7	Select for: High grain yield Reduced lodging Little or no disease		
	High yield stability was first noted in the F6 generation and confirmed in all subsequent generations.		

'2115' TRITICALE

Exhibit B. Statement of Distinctness

2115 triticale is most similar to the triticale variety, "498". 2115 differs from 498 in being approximately 4 inches shorter (Table B1), and approximately ten days later to head out (Table B2). 2115 differs from triticale "308" in that 2115 has prostrate juvenile growth while that of 308 is erect, an upright leaf carriage while that of 308 is recurved, purple auricles while those of 308 is white, and a white coleoptile while that that of 308 is purple.

Table B1. Plant Height (inches)

University Yield Trials

Year	Location	2115	498	LSD
				(0.05)
2000	Blackville, S. Carolina	37	41	2.6
2000	Florence, S. Carolina	39	44	3
2001	Blackville, S. Carolina	41	44	2.8
2001	Clemson, S. Carolina	34	40	3.6
2001	Florence, S. Carolina	35	40	2.6
2001	Rowan, N. Carolina	29	31	NA
2001	VPI Grain Yield Trials	35	39	2
2002	Clemson, S. Carolina	34	37	4
2002	Orange, Virginia	38	45	2
•	AVERAGE	36	40	

Table B2. Heading Date

University Yield Trials

Year	Location	2115	498	LSD (0.05)
		Number of Day	ys after March 1	
2000	Clemson, S. Carolina	48	40	NA
2001	Clemson, S. Carolina	57	45	3
2001	VPI Grain Yield Trials	60	55	1
2001	Rowan, N. Carolina	49	35	4
2002	Clemson, S. Carolina	51	42	NA
	AVERAGE	53	43	

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE LIVESTOCK, MEAT, GRAIN AND SEED DIVISION BELTSVILLE, MARYLAND 20705 OBJECTIVE DESCRIPTION OF VARIETY

TRITICALE

NAME OF APPLICANT(S)	VARIETY NAME OR TEMPORARY DESIGNATION		
RESOURCE SEEDS, INC.	2115		
ADDRESS (Street and No., or F.F.D. No., City, State, and ZIP Code)	FOR OFFICIAL USE ONLY		
P.O. BOX 1319, GILROY, CA 95021	PVPO NUMBED 0 2 0 0 2 6 7.		
Place the appropriate number that describes the varietal character of this variety in the Place a zero in first box (6.8- $0.8.9$) or 0.9) when number is either 99 or less			
1. GROWTH HABIT:			
2 1 = SPRING 2 = INTERMEDIATE 3 = WINTER			
1 Juvenile Plant Growth: 1 = PROSTRATE 2 = SEMIPROSTRATE	3 = ERECT		
Photoperiod: 1 = INSENSITIVE 2 = SENSITIVE			
2. PLOIDY:	,		
1 = HEXAPLOID 2 = OCTOPLOID 3 = OTHER (Specify)			
4 2 2n CHROMOSOME NUMBER			
3. MATURITY (50% Flowering):			
1 = VERY EARLY 2 = EARLY 3 = MIDSEASON 4 = L	ATE 5 = VERY LATE		
DAYS EARLIER THAN	ARMACK 2 = ROSNER 3 = PATHFINDER		
1 1 DAYS LATER THAN . 498	A 204 5 = ARMADILLA		
4. HEIGHT:			
0 9 0 CM. HIGH 3 1 = DWARF 4 = MIDTA			
1 0 CM. SHORTER THAN . 498	ARMACK 2 = ROSNER 3 = PATHFINDER		
CM. TALLER THAN	A 204 5 = ARAMADILLA		
5. PLANT COLOR AT BOOT STAGE:			
3 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN			
6. STEM:			
1 Anthocyanin: 1 = ABSENT 2 = PRESENT			
4 Neck Hairiness: 1 = NONE 2 = SLIGHT 3 = MODERATE	4 = HEAVY		
Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Spi	ecify)		
7. LEAVES:			
Flag Leaf: 1 = NOT TWISTED 2 = TWISTED 3 2 CM.	LEAF LENGTH: 1st Leaf Below Flag Leaf		
	LEAF WIDTH: 1st Leaf Below Flag Leaf		
Leaf Carriage: 1 = UPRIGHT 2 = RECURVED 3 = DROOPING Auricle Color	1 = COLORLESS OR WHITE 2 = PURPLE 3 = OTHER (Specify)		
FORM LMGS-470-33 (3-83) (Formerly Form GR-470-33 8/75 which may be used)	Page 1 of 3 .		

8. HEAD:					
1 Density: 1 = LAX 2 = MIDDENSE 3 = DENSE					
5 Shape: 1 = FUSIFORM 2 = OBLONG 3 = CLAVATE 4 = ELLIPTICAL 5 = OTHER (Specify)tapering					
Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETTED 3 = AWNLETTED 4 = AWNED					
Awn Color: 1 = WHITE 2 = YELLOW 3 = TAN 4 = BROWN 5 = BLACK					
1 2 CM. HEAD LENGTH 1 0 MM. HEAD WIDTH					
9. GLUMES AT MATURITY:					
Pubescence: 1 = GLABROUS 2 = SLIGHTLY PUBESCENT 3 = PUBESCENT					
Color: 1 = WHITE 2 = YELLOW 3 = TAN 4 = BROWN 5 = BLACK					
3 Length: 1 = SHORT 2 = MIDLONG 3 = LONG 1 Width: 1 = NARROW 2 = MIDWIDE 3 = WIDE					
Shoulder: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 3 4 = SQUARE 5 = ELEVATED 6 = APICULATE Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE					
10. COLEOPTILE COLOR:					
1 = WHITE 2 = GREEN 3 = PURPLE					
11. SEED:					
3 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL					
Smoothness: 1 = SMOOTH 2 = SLIGHTLY WRINKLED 3 = WRINKLED					
Brush Area: 1 = SMALL 2 = MIDSIZE 3 = LARGE					
Brush Length: 1 = SHORT 2 = MIDLONG 3 = LONG					
Phenol Reaction: 1 = IVORY 2 = FAWN 3 = LIGHT BROWN 4 = BROWN 5 = BROWN BLACK					
Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = BLACK 6 = OTHER (Specify)					
4 B GMS. PER 1,000 SEED					
12. DISEASE (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Tolerant):					
STEM RUST (Races)					
STRIPE RUST (Race) ERGOT					
POWDERY MILDEW BACTERIAL STRIPE					
SEPTORIA YELLOW DWARF					
OTHER (Specify)OTHER (Specify)					
13. INSECT (O = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Tolerant):					
GREENBUG HESSIAN FLY RACE:					
CEREAL LEAF BEETLE DE F G					
OTHER (Specify)					

4. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:		200200267	
CHARACTER	VARIET	Υ	
PLANT TILLERING	Presto		
WINTER HARDINESS	498		
AREA OF ADAPTATION	498	·	
SEED SHAPE			

REFERENCES:

L. W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, USDA.

W. E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, Contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts.

COMMENTS:

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE	The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.		
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	1 very sentential by the convey 17 H C C 1	letermine if a plant variety protection 2421). Information is held confidential 6).	
1. NAME OF APPLICANT(S)	TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME	
RESOURCE SEEDS, INC.	42115	2115	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (include area code)	6. FAX (include area code)	
P.O. Box 1319, Gilroy, CA 95021	408/847-1051	408/847-0604	
	7. PVPO NUMBER 2 0 0 2	00267	
8. Does the applicant own all rights to the variety? Mark an "X" in appro	priate block. If no, please explain.	YES NO	
 Is the applicant (individual or company) a U.S. national or U.S. based If no, give name of country 	company?	X YES NO	
10. Is the applicant the original owner?	NO If no, please answer one of the	following:	
a. If original rights to variety were owned by individual(s), is (are) the	original owner(s) a U.S. national(s)?		
_ YES _	NO If no, give name of country		
b. If original rights to variety were owned by a company(ies), is(are) t		ny?	
YES	NO If no, give name of country		
11. Additional explanation on ownership (if needed, use reverse for extra	space):		
	Star Communication (Communication Communication Communicat		
PLEASE NOTE:			

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

- 1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- 2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- 3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to compete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (YDD). USDA is an equal employment opportunity employer.

STD-470-E (07-97) (Destroy previous editions).

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